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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,299	09/19/2001	Cecile Nocerino	13833.0007	8148

7590

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STEPTOE & JOHNSON LLP  
1330 Connecticut Ave., N.W.  
Washington, DC 20036

EXAMINER
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BERKO, RETFORD O

ART UNIT	PAPER NUMBER
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1615

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/955,299

Applicant(s)

NOCERINO ET AL.

Examiner

Retford Berko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 20-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 20-38 are rejected under 35 U.S.C. 102 (b) as anticipated by Tanner et al (US 5, 827, 508).

3. According to applicant's claim 1, the invention is a liquid-phased cosmetic composition packaged in aerosol device comprising nanoparticles of alumina (size of 2-200 nm) and a propellant (dimethyl ether, 1,1-difluoroethane, a mixture of dimethyl ether and a C3-C5 alkane).

4. Patent '508 teaches a cosmetic composition in aerosol spray formulation (col 3, lin 20 and col 9, lin 25-30) wherein the zinc oxide particles are surface-treated with 0.1-50 wt% alumina (col 6, lin 60 continuing to col 7, lin 1-5). The particle size is 0.01 microns to 100 microns; i.e 10 nanometers to 100x1000 nanometers (col 16, lin 55-60). The composition contains a propellant and a C3-5 alkane (e.g. difluoroethane, dimethyl ether, butane or isobutene; col 9, lin 20).

5. As in applicant's claim 21, Patent '508 teaches that the primary nanoparticles size is 0.01 microns to 100 microns (ie. 10 nm to 100x1000 nm; col 16; lin 55-60), thus the particle size taught by Patent '508 is within the range 5-50 nm claimed by applicant.

6. As in applicant's claim 22-24, 26 and 28, the alumina content of the composition (used as surface treatment material) is 0.1-50% and is present as mixtures with silicone oxide (col 7, lin 1-

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30). The composition also comprises a metal other than alumina, e.g. —titanium dioxide; col 18, lin 25 or salts of calcium, aluminium or zirconium and mixtures; col 7, lin 60.

7. Having at least 50 wt% and more than 90 wt% alumina in the composition as in applicant's Claims 24-25, though not specifically taught in the prior art reference, constitute manipulated amounts of ingredients in the composition which by themselves without any asserted criticality, add no patentable weight to applicant's claimed invention. Similarly, having nanoparticles between 0.05-5 wt% of the total composition as in applicant's claim 29 is manipulated amount.

8. As in applicant's claim 27, Patent '508 teaches the use of boehmite as the form of alumina used in the composition.

9. According to applicant's claims 30, 31 and 32, dimethyl ether is a propellant, present in the composition in amounts in the range of 2-90%. Patent '508 teaches the use of dimethylether as propellant or carrier. Though the amount of dimethylether propellant is not stated specifically in Patent '508, the example given shows the presence of an equivalent carrier (methoxy-t-butylbenzoyl-methane as between 0.5-2% in the composition (col 16).

10. As in applicant's claims 33, 34, and 36, Patent '508 teach that water is an ingredient in the composition (col 9, lin 40, col 15, lin 65). Applicant claims the use of ethanol as solvent. Patent '508 teach the use of alcohols (--this includes but is not limited to ethanol; col 8, lin 65 continuing to col 9, lin 1). Patent '508 teach the use of polypropylene glycol (polyol) (col 14, lin 30.

11. As claimed by applicant in claims 37 and 38, Patent '508 teach that the composition comprises fragrance, pigment, coloring (or dye), oil, retinoid or retinoic acid (vitamin A) and

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homopolymers or copolymers---col 15, lin 10-30 and col 13, lin 10-35. Patent '508 also teaches that the composition comprises fatty acids (col 13, lin 55-65).

**Claim Rejections - 35 USC § 103**

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanner et al (US 5, 827, 508) in view of Gosling et al (US 4, 359, 456).

14. In claims 33-36, applicant claims that the composition comprises of water, ethanol or other C1-C4 alcohol as solvent. Applicant claims less than 20 wt % water content in the composition. In claims 39-40, applicant claims a procedure for the treatment of hair using the formulation.

15. Patent '508 teaches the use of water and other solvents as ingredients in the composition (col 8, lin 65 continuing to col 9, lin 1). Patent '508 teaches that a variety of solvents of various viscosity and polarity could be used to disperse the particles in the composition. Patent '508 teaches that the composition can be formulated in a variety of product types (col 8). Patent '508 does not teach: (a) water content of less than 20 wt % (b) ethanol as solvent (c) procedure for treating hair with the formulation.

16. Gosling et al (Patent '456) teach the use of water (4.3 wt %-50 wt %; col 24, lin 5-60) and ethanol (30-50 wt %; col 24, examples 25 and 27) as solvents---providing various formulations of the composition.

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17. One of ordinary skill in the art would have been motivated to use water and ethanol as solvents (as per the teaching in Patent '456) as the specific alcohol in place of the unspecified alcohol (in Patent '508) when making the composition, as claimed by applicant. One of ordinary skill would have thereby expected to obtain optimum dispersion of the particles in the formulation in order to facilitate analysis after manufacture and also in form that can be used for treating hair, e.g. a shampoo formulation. The process of treating hair is implicit if the composition is obtained in the appropriate formulation. Therefore the invention as a whole claimed by applicant would have been prima facie obvious at the time it was made by the applicant.

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: (a) Bollens et al teach a cosmetic composition in many formulations and a process for treatment of skin, hair and nails (col 11, lin 1-15). Bollens does not teach nanosize particles.

### **Correspondence**

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Retford Berko whose telephone number is 703-305-4442. The examiner can normally be reached on M-F at 8:00 a.m.-5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on 703-308-2927. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-9903 for regular communications and 703-746-9903 for After Final communications.

An inquiry of a general nature or relating to the status of this communication or proceeding should be directed to the receptionist whose telephone number is 703-308-1243.

**THURMAN K. PAGE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1600**